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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/120,664

07/22/1998

DAVID F. GAVIN

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WIGGIN AND DANA LLP
ATTENTION: PATENT DOCKETING
ONE CENTURY TOWER, P.O. BOX 1832
NEW HAVEN, CT 06508-1832

EXAMINER

GROSS, CHRISTOPHER M

ART UNIT

PAPER NUMBER

1639

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/120,664

Applicant(s)

GAVIN ET AL.

Examiner

Christopher M. Gross

Art Unit

1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,38 and 40-49 is/are pending in the application.
- 4a) Of the above claim(s) 47-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,38,40-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1639

DETAILED ACTION

Responsive to communications entered 2/19/2007. Claims 1,38,40-49 are pending. Claims 47-49 stand withdrawn. Claims 1,38,40-46 are examined herein to the extent of the elected invention and species.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/19/2007 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

Applicant's election with traverse of Group I (claims 1-11 and 35-38: corresponding to present claims 1, 38 and 40-49) entered 5/27/1999 is once again acknowledged.

In response to the election of species requirement, applicant's elected, without traverse, zinc pyrithione which reads on claims 1, 38 and 40-46.

Claims 47-49 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

Priority

This application has a filing date of 7/22/1998. Applicant makes no claim for the benefit of any prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c).

Maintained Claim Rejection - 35 USC § 112 First Paragraph

Claims 42, 45 and 46 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (NEW MATTER REJECTION).

Response to Arguments

Applicant argues see p 6 (2/19/2007) that the "provisio that when the metal is copper then the metal pyrithione and the metal or metal-containing compound are present within a weight range of ratios from 1:20 to 20:1 of metal pyrithione relative to the metal or metal-containing compound" finds support on at least page 10 lines 1-15 and 23-39, alone or together with page 16 example 4 of the present specification.

Applicant's arguments have been considered but not deemed persuasive for the following reasons.

Page 10 by itself fails to provide support since the ratio (1:20 to 20:1) refers specifically to a copper containing salt, hydroxide or oxide. Similarly, Example 4 refers to a 1:20 preparation which is exclusive for cuprous oxide and copper pyrithione. Accordingly, there is no support in the specification for metal or metal-containing

Art Unit: 1639

compounds other than copper salts, copper hydroxide, or cuprous oxide with respect to copper pyrithione for the presently claimed range.

Accordingly, this rejection is hereby maintained.

Maintained Claim Rejections - 35 USC § 102

Claims 1, 38, 40, 41, 43 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Morris US Pat. No. 5,916,947 (6/99: filed 9/96 or earlier).

Response to Arguments

Applicant argues see p 7 (2/19/2007) that Morris et al do not teach all elements.

Applicant's arguments (2/19/200) p 7, have been fully considered but they are not persuasive for the following reasons.

Applicant argues that the biocidal composition of Morris is not formed by a chemical reaction of pyrithione acid or a water-soluble salt of pyrithione with a portion of the metal or metal-containing compound of said core, as set forth in claim 1, for instance. Specifically, applicant argues that coated or sublimed Zinc Pyrithione, as per Morris et al will not transchelate with Zinc Oxide as Zinc cannot transchelate with itself and there is no stability constant difference to cause transchelation.

This is not found persuasive because the arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness.") (see MPEP 2145 I.) In the instant case, Applicant's counsel argues

Art Unit: 1639

coating or subliming zinc pyrithione would not provide the claimed invention because transchelation will not occur, however counsel does not provide objective evidence establishing this as a fact.

Nevertheless, assuming *arguendo* that transchelation does not occur, the physical process per Morris et al: $[ZnO \text{ (core)} + ZnPT_2 \rightarrow ZnO \text{ (core)} + ZnPT_2 \text{ (shell)}]$ still provides the same material as the chemical process of the instant claimed invention: $[2 ZnO + 2NaPT \rightarrow ZnO \text{ (core)} + ZnPT_2 \text{ (shell)}]$. Therefore, the product of Morris et al. meets all of the structural limitations of the claimed product (see above) except for the product-by-process limitations (i.e a metal pyrithione *formed* by reaction of pyrithione acid or a water-soluble salt of pyrithione with a portion of the metal or metal-containing compound of said core) and thus would anticipate the claimed biocidal composition. See MPEP § 2113, “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.’ *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).” Here, Applicants’ claims are drawn to a biocidal composition (i.e., a product), but are defined by various method steps that produce said biocide and, as a result, represent product-by-process claims. Thus, the process limitations do not appear to provide any patentable weight to the claimed invention in accordance with MPEP §

Art Unit: 1639

2113. One of ordinary skill would expect the product to be the same no matter how it was synthesized and/or prepared.

Indeed Morris et al disclose in example 4, the excellent antifouling properties of Zinc Oxide particles coated with Zinc Pyrithione and, according to *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990): "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not."

Claims 1, 38, 43 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Hani et al. US Pat. No. 6,162,446 (12/00: filed 3/98).

Please note that the above statement of rejection has been modified from the original version to more clearly address applicants' newly amended claims. Specifically the claims 40 and 41 no longer read on Hani et al.

Response to Arguments

Applicant argues see p 8 (2/19/2007) that Hani et al do not teach all elements.

Applicant's arguments have been fully considered but they are not persuasive for the following reasons.

Applicant alleges the claims 1,38 43 and 44 are now closed to other materials, by incorporation of the language "consisting essentially of" representing closed language, however according to MPEP 2113.03, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, the phrase "consisting essentially of" will be construed as equivalent to "comprising." It is noted that the

Art Unit: 1639

abstract uses the phrases “[a] core comprising a metal or a metal-containing compound” and “[a] shell comprising a pyrrithione adduct comprising the reaction product of pyrrithione”

The Examiner notes that the limitation that the core and shell differ in composition is not set forth in the claims, which are drawn to a core consisting essentially of a metal and shell consisting essentially of a metal pyrrithione. As mentioned above, consisting essentially of is taken as equivalent to comprising due to ambiguity in the abstract.

The Hani reference discloses a composition in particle form, which comprises the same components (zinc and pyrrithione) which possesses the same presently claimed utility (e.g. biocidal). Therein, the particle complex of Hani, which possesses ingredients within the scope of the presently claimed invention, would *inherently* possess the same physical parameters (e.g. core and shell).

According to MPEP 2112.01, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). “When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.” In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Claims 1, 38, 43 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Mohseni et al. US Pat. No. 6,465,015 (10/02: filed 2/98)

Please note that the above statement of rejection has been modified from the original version to more clearly address applicants' newly amended claims. Specifically the claims 40 and 41 no longer read on Mosheni et al.

Response to Arguments

Applicant argues, see p 9 (2/19/2007), that Morris et al do not teach all elements.

Applicant's arguments have been fully considered but they are not persuasive for the following reasons.

Applicant alleges the claims 1,38 43 and 44 are now closed to other materials, by incorporation of the language "consisting essentially of" representing closed language, however according to MPEP 2113.03, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, the phrase "consisting essentially of" will be construed as equivalent to "comprising." It is noted that the abstract uses the phrases "[a] core comprising a metal or a metal-containing compound" and "[a] shell comprising a pyrithione adduct comprising the reaction product of pyrithione"

The Examiner notes that the limitation that the core and shell differ in composition is not set forth in the claims, which are drawn to a core consisting essentially of a metal and shell consisting essentially of a metal pyrithione. As mentioned above, consisting essentially of is taken as equivalent to comprising due to ambiguity in the abstract.

The Mosheni et al reference discloses a composition in particle form, which comprises the same components (zinc and pyrithione) which possesses the same presently claimed utility (e.g. biocidal). Therein, the particle complex of Mosheni, which possesses ingredients within the scope of the presently claimed invention, would *inherently* possess the same physical parameters (e.g. core and shell).

According to MPEP 2112.01, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Maintained Claim Rejection - 35 USC § 103

Claims 1, 38 and 40-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris US Pat. No. 5,916,947, Hani et al. US Pat. No. 6,162,446 or Mohseni et al. US Pat. No. 6,465,015 as applied to claims 1, 38, 40, 41, 43 and 44 above, and further in view of Kappock et al. US Pat. No. 5,518,774 (5/96)

Response to Arguments

Applicant argues see p 10 (2/19/2007) that Morris et al teaches away from the teachings of Kappock et al.

Applicant's arguments have been fully considered but they are not persuasive for the following reasons.

Applicant argues that Morris et al teaches away from Kappock et al because Morris et al does not teach transchelation whereas Kappock et al utilizes complete transchelation in to prepare Zinc Pyrithione.

In regard to the latter point, Applicant's attention is respectfully invited to column 2, step (b) where Kappock et al teach "incorporating a metal ion-containing compound (such as a metal salt) into said coating composition to cause at least a portion of said metal ion-containing compound to transchelate with at least a portion of said soluble pyrithione salt" In other words, complete transchelation is not required by Kappock et al.

Furthermore, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed..." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004). Nowhere does Morris et al disparage the use of chemical transchelation to prepare layered particles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Gross whose telephone number is (571)272-4446. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. Douglas Schultz can be reached on 571 272-0763. The fax phone

Art Unit: 1639

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher M Gross
Examiner
Art Unit 1639

cg

JON EPPERSON
PRIMARY EXAMINER

